REMARKS

Status of Claims

Claims 1-10 are pending in the present application. By the Office Action, Claims 1-10 are rejected under 35 U.S.C. 102(b) over Burke '076 and Claims 4-9 are rejected under 35 U.S.C. 102(b) over Blaser, '979. These rejections are respectfully traversed and each of the claims will be considered in the following.

Claims 1-3

Claim 1 includes the limitation "each spring structure bottom layer having a larger contact surface area than the corresponding top layer." The Burke '076 small wall section 304 (referring to Fig. 14) is intended to telescopically slide into the large wall section 302. Apparently (according to Burke '076 col. 10 lines 31-37), the small wall section 304 compresses radially inwardly in order to telescope further into the large wall section 302, with the wall section 304 contacting the next shoulder 308 in the large section 302. Each subsequent shoulder 308 is of smaller diameter and thus as the structure compresses further to the next shoulder, the next shoulder has a smaller contact surface area. By contrast as the structure of Claim 1 compresses, the next or bottom layer has a larger contact surface area thereby providing a higher compression rate than the corresponding top layer.

Claim 1 also includes among others the limitations of "the top and bottom compression layers aligned so that, in use, once the top layer is compressed, additional force supplied to the top layer is substantially transferred through the top layer to the corresponding bottom layer." By contrast, the Burke '076 small wall section 304 (referring to Fig. 14) telescopically slides into the large wall section 302. Apparently (according to Burke '076 col. 10 lines 31-37), the small wall section 304 compresses radially inwardly in order to telescope further into the large wall section 302. Thus, Burke '076 does not provide the limitation "once the top layers compress, additional force supplied to the top layer is substantially transferred through the top layer to the corresponding bottom layer" as in Claim 1.

Thus it is submitted that Claims 1-3 are not anticipated by Burke '076.

Claims 4-6

Claim 4 includes limitation "wherein the compression structures are layered to provide gradual changes in compression rate as increasing force is applied pressing the base and top sheets together." It is not understood how the Burke '076 structure of Fig. 14 provides a layered structure. The small wall section 304 merely telescopes within the large wall section "in step-wise fashion from one of the shoulders 308 on its respective large wall section 302 to the next shoulder. Simultaneously, the inner cell wall section is radially compressed. This step-wise telescopic contraction and radial compression which occurs in the interengaging cell wall sections 302, 304 during impact, introduce additional friction losses during impact which are effected to dissipate the energy of the impacting body. In this way, the impact cushioning ability of the mat in Figures 13-15 may be enhanced without increasing the rebound tendency of the mat. In other words, increasing frictional losses which occur in the impact cushioning action of a mat increases the total impact energy which may be cushioned by the mat without increasing the component of the impact energy which is absorbed by elastic deformation of the resilient members of the mat." Burke '076, col. 10 lines 32-49. Thus, rather than providing gradual changes in compression rate as in Claim 4, the Burke '076 structure is merely attempting to provide for friction losses in addition to merely typical compression.

Similarly, the Blaser '079 structure is merely a telescoping set of concentric cylinders that are interconnected to one another like a spring. Thus, each one of the inner connection sections 17, 18 are flexing (actually in tension rather than in compression) upon compression between the bottom wall 25 and the top wall 14. Since all the sections are flexing at all times, there is no "layer to provide gradual changes in compression rate" as in Claim 4. Moreover, Blaser '979 only shows a plurality of enclosures 15 on the bottom of pad 14. Thus, Blaser '979 does not include a plurality of spring structures integrally formed in the base sheet and a plurality of compression structures integrally formed in the top sheet as in Claim 4.

Claim 5, depending upon Claim 4, includes the additional limitation "wherein each compression structure comprises a plurality of concentric cylindrical layers." Claim 6, depending upon Claim 4, includes the additional limitation "wherein each

compression structure comprises a plurality of frustrum shaped layers." The shoulders 308 within the inner wall of the large wall section 302 of Burke '076 do not meet the limitation. Moreover, the small wall section 304 does not appear to have any structure which could remotely be directed to "a plurality of concentric cyndrical layers" as in Claim 5 or "a plurality of frustrum shaped layers" as in Claim 6.

Similarly, Blaser '979 does not disclose such a combination as in Claims 5 and 6 since the Blaser '979 structure is a plurality of annular walls 17, 18 interconnected by flexible connections 21.

Thus it is submitted that Claims 4-6 are not anticipated by Burke '076 or Blaser '979.

Claims 7-9

Claim 7 includes limitation "a layered spring structure and a corresponding compression structure, each structure formed of a compressible material, and the structures aligned with one another for transfer of applied force through one structure to the other, wherein the spring structure is layered with progressively larger contact areas for contacting the corresponding compression structure." By contrast, the Burke '076 small wall section 304 (referring to Fig. 14) telescopically slides into the large wall section 302. Apparently (according to Burke '076 col. 10 lines 31-37), the small wall section 304 compresses radially inwardly in order to telescope further into the large wall section 302. Thus Burke '076 does not disclose "layered spring structure with progressively larger contact areas for contacting the corresponding compression structure " as in Claim 7.

As for Blaser '979, the spring structure is merely a bellows structure with interconnected cylindrical sections that flexed during compression of the unit. It is submitted that such a structure does not anticipate a "layered spring structure with progressively larger contact areas for contacting the corresponding compression structure " as in Claim 7.

Claim 8 specifies that the compression section is substantially flat (such as for example the compression layer in Fig. 4C) and Claim 9 specifies that the compression layer is layered (such as for example Fig. 1A). Thus according to Claim 9, the spring

assembly has both a layered spring structure and layered compression structure. As to Burke, '076, the same structure cannot be both layered and flat. As to Blaser '979, the Office Action points to the same enclosure 15 as both the spring structure and the compression structure whereas Claim 9 sets forth two structures.

Claim 10 includes limitation "said plunger region having a length greater than a corresponding height of the recess so that, in use, the plunger region is fully compressed when fully engaged in the recess." By contrast, the small wall section 304 of Burke '076 has a step-wise engagement along the inner steps of the large wall section 302. It is also not clear whether or not the small wall section 304 would have a height greater than a corresponding height of the recess or merely a height equal to. Absent such an express teaching, it is submitted that Burke '076 does not disclose this limitation.

Conclusion

Therefore it is submitted that Claims 1-10 are allowable and a Notice of Allowance is earnestly solicited.

Respectfully submitted,

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